Mental Health Issues in People with Developmental Disabilities

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Introduction

Learn how to identify and treat mental illness in people who have a developmental disability

- If not treated, learn how it affects their functioning
- When treated, learn how it *improves* their functioning

Educational Objectives

Describe the personal and socioeconomic burden of mental disorder on patients, family, the community and healthcare systems;

- Review the clinical presentation of mental illness in the population with developmental disabilities;
- Discuss therapeutic goals and treatment strategies.

People with Developmental Disabilities

Prevalence of Developmental Disabil in General population:

1% of the population is classified as having a developmental disability

– 6 million+ persons in USA who have a DD

Percentage of mental illness in general population:

- 1% Schizophrenia

  -10% Depression

  5% OCD, Anxiety,
- 1% Bipolar illness

Presence of mental illness is underdiagnosed in the population with Developmental Disabilities

WHY ?????

Barriers to diagnosis and the treatment of mental illness:

Provider Factors

- Patient factors
- System factors

Provider factors:

There is little or no training in the medical profession for recognizing mental illness in people who have a developmental disability

- Issues are labeled as "behavioral" rather than as a clinical presentation of underlying mental illness.

Barriers to diagnosis and the treatment of mental illness:

Provider Factors

- Patient factors
- System factors

Patient factors:

Variety of reasons

- Difficulty with communication
- Difficulty in understanding their communication
- Demonstrate symptoms behaviorally rather than verbally
- Difficulties in expressive and receptive language skills

Barriers to diagnosis and the treatment of mental illness:

Provider Factors

- Patient factors
- System factors

System Issues:

- Lack of training for people responsible for care
- Poor acceptance of mental health diagnosis
- Mental health departments say: “Go to the regional center.”
- Regional centers say: “We do not have therapists, only case workers.”

Pervasiveness of mental illness in the population with developmental disabilities:

- Higher than general population
- Most underserved population
- Significant number of consumers have diagnosable mental illness

Getting ready for MD appointment

Get prior medication history including past medications, dose and duration etc

ake list of all current medication including

etc

- All laboratory results, consultation etc.
- Staff who knows the patient for longest
- Have a list of symptoms or “behaviors”
- Try to get family history etc.

Clinical Evaluation of the patient

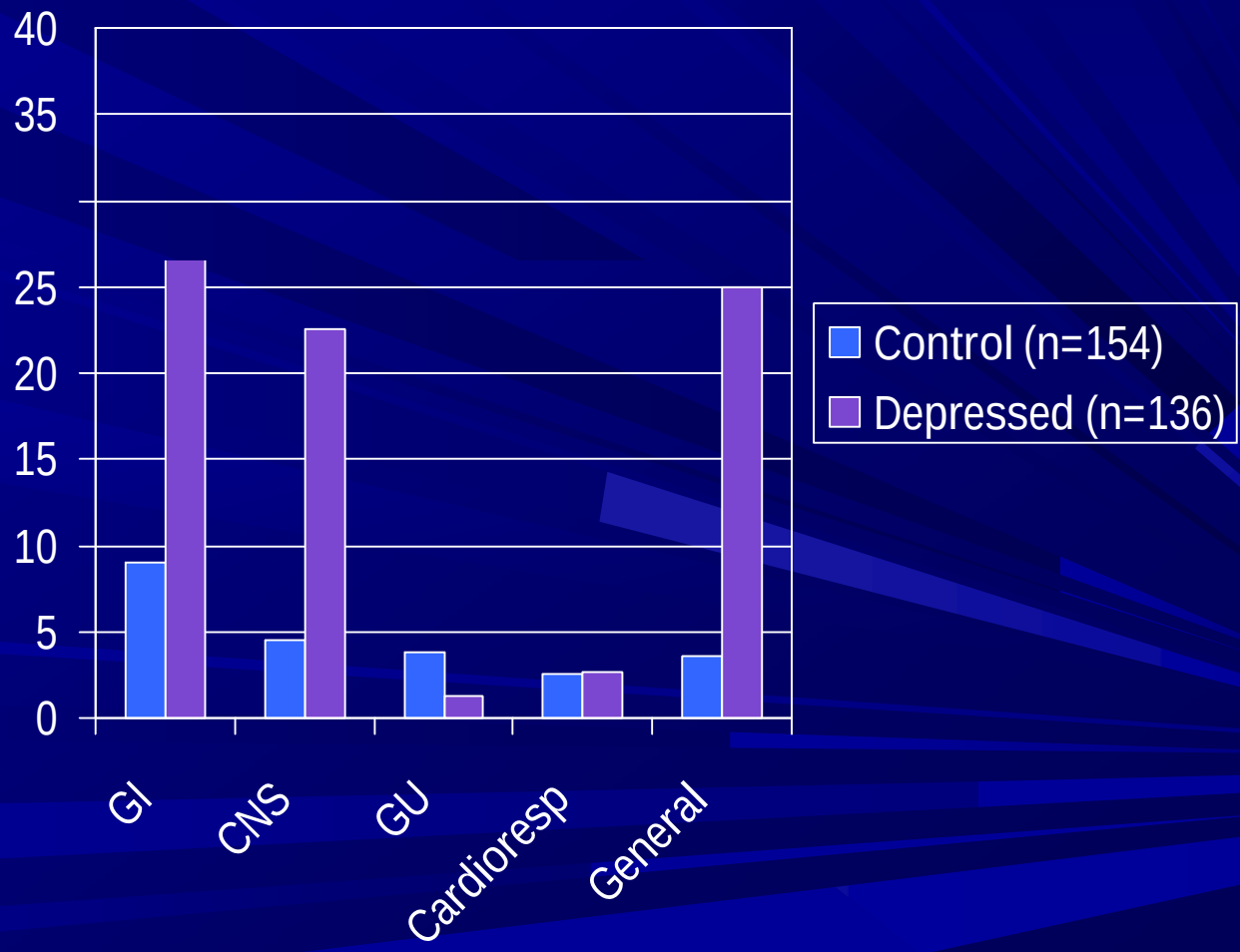
- the patient
  - “Listen” and evaluate any complaint
  - Observe for any clinical symptoms, behavior pattern
    direct care staff (who knows pt. for long)
    s in sleep, appetite, behavior, interaction with others, self n etc
    Ask to describe whatever they have observed
    family members
  - Hx of mental illness
  - Hx of treatment
- Medical history
  - Review of systems
  - All current (prescribed and non-prescribed) and past medication hx
  - Allergy
- Review of records
  - Labs
  - Prior treatment records etc.

Leading Source of Disease Burden in Established Market Economies, 1990

Cause	Total DALY*	% of Total
Ischemic heart disease	8.9	9.0
Major Depression	6.7	6.8
CVS disease	5.0	5.0
Alcohol use	4.7	4.7
Road traffic accidents	4.3	4.7
All causes	98.7	

- DALY=disability-adjusted life-year
- Lost years of healthy life, including those due to premature death of disability, in millions.

Presenting Complaints in Primary Care Practice



Depression and Somatization

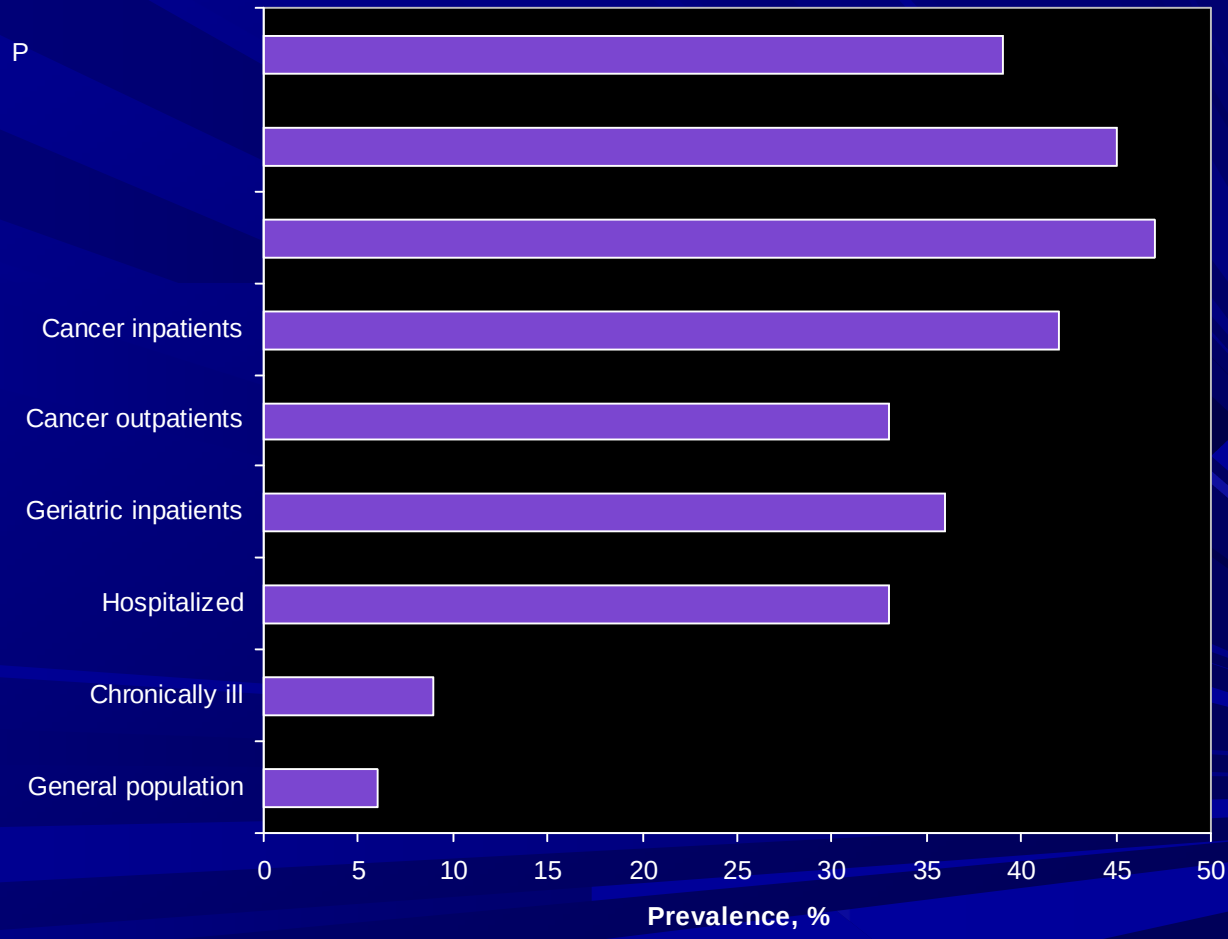
Most depressed patient have medically unexplained somatic complaints

Most common somatic complaints associated with depression:

- Joint pain
- Headache
- Backache
- Abdominal pain

- Two or more unexplained pain complaints raises suspicion of major depressive or other mood disorder
- Treatment of depression usually results in complete relief of pain complaints

Prevalence of Depressive Disorders in Patient Populations



DSM-IV Symptoms of Major Depressive Episode

- Depressed mood or irritability

  Loss of interest or pleasure in most activities

  Insomnia or hypersomnia
- Fatigue or loss of energy
- Feeling of worthlessness or excessive or inappropriate guilt
- Diminished ability to think or concentrate or make decision
- Suicidal thoughts

Consequences of Missed Diagnosis/Inadequate Treatment

- Morbidity
  - Decrease ability to cope
    Decrease quality of life
  - Strain on family and health care workers
  - Increased disability and mortality
- Suicide
  - 15% suicide risk

Causes of Organic Depression

- Pharmacologic
  - Contraceptive, corticosteroid, methyldopa, cimetidine, amphetamine, anti-cancer medicine
- Infectious
  - AIDS, viral hepatitis, infections mononucleosis.
- Endocrine
  - Hypo- and hyperthyroidism, hyperparathyroidism, postpartum Cushing's disease, etc.
- Collagen
  - Lupus, rheumatoid arthritis.

Neurologic

- Multiple sclerosis, Parkinson's disease, head trauma, brain tumors, stroke, dementia, etc.

- Nut
- min de ncy (B12, C, folate, n in, and thiamine.

- Neoplastic
- Cance the head of the pancreas

Depression Risk Factors

- Prior episodes

  Family history
- Prior suicide attempts
- Female gender
- Recent childbirth
- Alcohol and substance abuse
- Recent separation and bereavement

Criteria for an Adequate Trial Antidepressant Treatment

- Accurate diagnosis
- Appropriate antidepressant
- Appropriate dose (level if needed)
- Treatment duration of at least 6, but probably 8-10 weeks
- Good compliance

Cardinal Rules

First and foremost, do no harm

- The cure must not be worse than disease itself

Choosing an Antidepressant

- Efficacy
  - Most antidepressant are equally efficacious
- Adverse Effects
  - Tolerability
  - Interruption
- Compliance

Antidepressants (TCAs)

Agent	Usual daily	Anti-Cholinergic	Orthostatic Hypotention	comments
Elavil	300mg/d	ery high	Very high	Chronic pain, hypnotic
Anafrani	100 250mg/d	ery high	Very high	OCD
Norpramine	100-300mg/d	Moderate	Moderate	
Sinequan	100-300mg/d	Very high	Very high	
Tofranil	100-300mg/d	High	Very high	

Adverse Effect Profiles TCAs

- Dry mouth
- Blurred vision
- Constipation
- Sedation, drowsiness
- Weight gain
- Postural hypotension
- Dizziness
- Sexual dysfunction

Antidepressants (SSRIs)

	Usual daily Doses	Anti-Cholinergic	Orthostatic Hypotention	Comments
Celexa		None	None	Safer in OD
Prozac	-80mg/d		None	Safer in OD
Luvox	300mg/d			Safer in OD
Paxil	20-60mg/d	Low	None	Safer in OD
Zoloft	50-200mg/d	None	None	Safer in OD
Serzone	300-600mg/d	None	Low	Safer in OD

Adverse Effect profiles SSRIs

- Nausea
- Nervousness
- Insomnia
- Sexual dysfunction
- Headache

Recommendation for Length of Maintenance Therapy

- Continue the antidepressant doses for 6-9 months after the first episodes of depression
- Continue treatment indefinitely after 3 or more episodes of major depression

Recurrent Depression Risk Factors

Inadequate treatment

- Poor medication compliance

Frequent +/ multiple episodes

- Preexisting dysthymia
- Onset after age 60
- Familial mood disorder
- Co-morbid anxiety or substance abuse disorder

Conclusion

Depression among the most treatable illnes encountered by all physicians

- Lack of recognition of all signs/symptoms and failure to achieve remission can result in significant morbidity and mortality
- New treatment guidelines
  - Importance of identifying all symptoms, including physical symptoms of depression
  - Importance of achieving remission during acute and maintenance

What Is Schizophrenia?

It is not *split personality”

- The split is between thought processes and thought, emotion and behavior

Is it a single disease or a clinical syndrome?

Epidemiology

Incidence: 1%

- 9% risk in siblings

12% risk in children with one parent

50% in children of two parents

Types of Schizophrenia

- Catatonic
- Paranoid
- Disorganized
- undifferentiated

Organic Causes of Psychosis

- Space occupying lesions of the CNS
  - Brain abscess
  - Primary cerebral tumor
  - Metastatic carcinoma
  - Neurological
    - Alzheimer's disease
    - Huntington's chorea
    - Temporal lobe epilepsy
- Infections
  - Brain abscess
  - Syphilis
  - Meningitis (bacterial, fungal, TB

Organic Causes of Psychosis

- Metabolic and endocrine disorders
  - Diabetes mellitus
  - Hepatic failure
  - Thyroid disease
  - Uremia
- Drugs, medications and others
  - Alcohol
  - Amphetamines
  - Anticholinergic agents
  - Cocaine
  - Corticosteroids
  - Marijuana
  - Hallucinogens etc.

Components of Schizophrenia

- Positive symptoms
  - Hallucinations
  - Delusions
  - Disorganized thoughts
- Negative symptoms
  - Affective blunting
  - Anhedonia

Components of Schizophrenia

- Cognition
  - New learning
  - Memory
  - Attention/concen
- Mood symptoms
  - Dysphoria
  - Demoralization
  - suicide

Onset, Course, and Prognosis of Schizophrenia

Peak incidence

- Males: 15 to 25 years
- Females: 25 to 35 years

Course of illness

- Extremely variable
- Often chronic
- Sometimes episodic only

- Prognosis
  - Intensity of psychosis diminishes with age, although years of dysfunction are rarely overcome

Burden of Schizophrenia On Individuals

- Most catastrophic mental illness

  Devastates personality

  Associated with stigma
- High rate of attempted and completed suicide

Societal Burden Schizophrenia

- Urban problems
  - 10% of prison inmates
  - (10 times the normal incidents)
  - – 33% t0 50% of homeless population

Objectives of Antipsychotic Drug Therapy

Manage acute psychotic symptoms

- **Induce** remission from psychotic exacerbation
- **Maintain** clinical effect over time
- **Prevent** relapse
- **Enhance** nonpharmacologic therapies, such as psychotherapy, and rehabilitation efforts

Antipsychotics

Also known as

- Major tranquili
- Neuroleptic medications

Antipsychotic medications

Thorazine	50 – 1200mg
Mellaril	800mg
Serentil	400mg
Haldol	2 – 80mg
Navane	5- 80mg
Prolixin	2 – 80mg
Trilafon	8 – 64mg
Stelazine etc.	5 –60mg

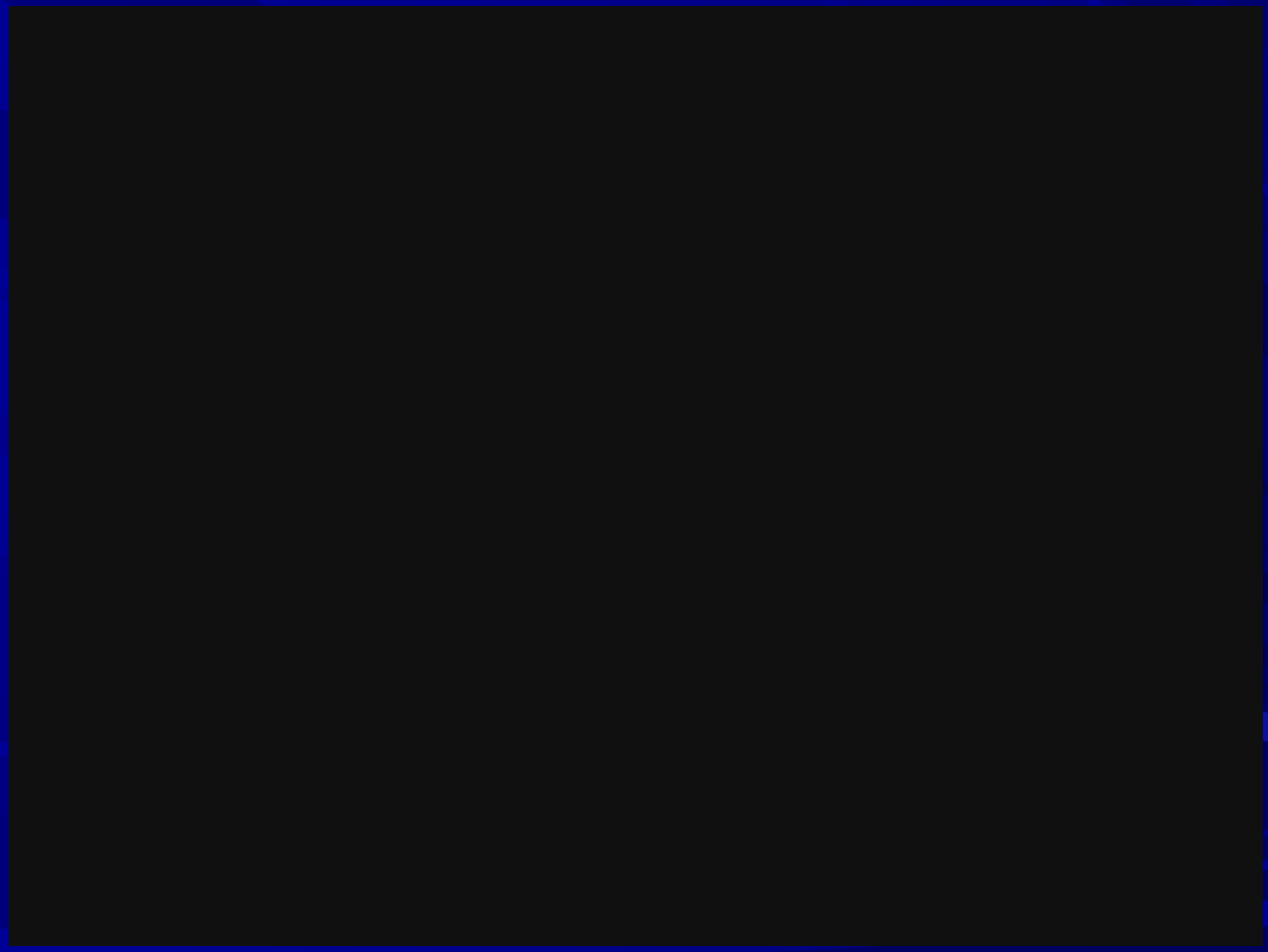
Atypical antipsychotics

Clozaril	12.5 – 900mg
Zyprexa	2.5 – 30mg
Risperidone	0.5 – 6mg
Seroquel	25 – 800mg
Geodone	40 – 160mg
Abilify	10 -40mg

Side Effects of Antipsychotics

- Extrapyramidal syndromes
  - Acute dystonic reaction
    - rismus (lockjaw)
    - Opisthotonus (arching of head backwards
  - Akathisia
    - Pacing
    - Restless
    - Fidgety
  - Parkinson's syndrome
    - Tremor
    - Rigidity
    - Tardive dyskinesia
- Sedation
- Seizures
- Neuroleptic malignant syndrome

An Example of Akathisia



Side Effects of Antipsychotics

- Anticholinergic
  - Peripheral
    - Dryness, dry mouth, difficulty with visual accommodation, constipation, delayed urination
    - Confusion, memory diff
    - Anticholinergic psychosis
- Cardiovascular and respiratory
  - Hypotension, prolongation of QT interval
- Occular
  - Narrow angle glaucoma, pigmentary retinopathy
- Hormonal
  - Hyperprolactinemia, galactorrhea, decreased menstruation, delayed ejaculation

Medication specific

- Mellaril
  - Pigmentary Retinopathy
  - Retrograde ejaculation
  - – Prolongation of QTc- causes sudden death
- Black box warning

Medication specific

Thorazine

-gray discoloration of skin, specifically in skin exposed to su

Medication specific

Haldol, Prolixin and Risperdal Consta available as depot IM injection for non-compliant patients

Clozaril

Indicated for drug resistant schizophrenia

- Requires special monitoring

Significant drooling

sedation

Zyprexa

Advantage

- Once a day dose
- Available in “Zidus” form
- Indicated for bipola

Disadvantage

- Weight g
- Increase Cholesterol and Triglycerides
- Increase risk of Diabetes

Risperidone

Advantage

- Less side effects than typical
- Less weight gain
- Indicated for Bipolar

Disadvantage

- EPS at high dose
- Increase Prolectin
- Increase risk for metabolic syndrome

Seroquel

- Slightly higher QT
- Slow titration required
- Indicated for Bipolar Disorder

Cardiac Safety of Thioridazine

In July 2000 a black box warning was added advising clinician of dose-related prolongation of QT

- Sudden deaths
- Baseline EKG and serum potassium level prior to and periodic monitoring
- If the QTc is higher than 500msec, therapy should be stopped

Medication known to prolong the QTc interval

- Antiarrythmics
  - Quinidine, Procainamide
- Antibiotics
  - Erythromycin, chloroquine
- Psychotropics
  - TCAs, Mellaril, Serentil, Ziprasidone

Medication known to inhibit CYP3A4

Luvox

- Serzone

Erythromycin

Tegamet

- Grapefruit juice
- Etc.

Increased Risk with Thioridazine

Female

-existing cardiac disease

- Hypokalemia

Alcohol intake

- Exercise
- Concomitant
  - TCAs
  - Hydroxyzine
  - ziprasidone

Metabolic Monitoring Recommendations During Atypical Antipsychotic Therapy

Metabolic Abnormalities

Drug	Weight Gain	Risk for Diabetes	Worsening lipid profile
Clozapine	+++	+	
Olazepine	+++	+	+
Risperdone	++	D	D
Quetiapine	++	D	D
Aripiprazole	+/-	-	-
Ziprasidone	+/-	-	-

+ = increase effect; - = no effect; D = discrepant results

Baseline Monitoring

- Personal and family H/O obesity, diabetes, dyslipidemia, hypertension, cardiovascular disease
- Weight and height (for BMI calculation)
- Waist circumference (at umbilicus)
- Blood pressure
- Fasting plasma glucose
- Fasting lipid profile

Monitoring Protocol

	Baseline	4 weeks	8 weeks	12 weeks	Quarterly	nnually
Personal /						
weight	X			X	X	
Waist (inch)	X					X
BP	X			X		X
Fasting Glucose	X			X		X
Fasting Lipid	X			X		

Weight

Avoid medication associated with likelihood of weight gain…Zyprexa

- Baseline and monthly weight monitoring
- Nutritional and behavioral intervention
- Switching to less offending antipsychotic medications when behavioral methods have not been successful

Lipids

Annual complete fasting lipid panel as routin health monitoring

For high potency antipsychotics

, Geodon, Risperdal

Baseline and quarterly fasting lipid panel:

- Clozaril, Zyprexa, Seroquel
- Decrease semiannually or annually if no lipid abnormalities

Glucose

- Screen for first-degree family H/O type II DM and personal H/O diabetes
- Educate about symptoms of diabetes
  - Fatigue, thirst, polyu
- Exercise care in selection of antipsychotics for known DM, impaired fasting glucose or multiple risk factors

Glucose

- Symptoms of diabetes should be inq about at each clinical visit. Unexplained rapid weight loss should raise concern about uncontrolled hyperglycemia

  Baseline and quarterly fasting glucose

  – Clozaril, Zyprexa, Seroquel
- Monthly Monitoring for first 3 months
  – Family hx, obesity, abnormal fasting glucose
- Baseline and every 6 months monitoring for low risk.

Glucose

Normal	<110 mg
Impaired fasting Glucose	110-125 mg
Provisional diabetes	>126 mg
Or random glucose	>200mg

Better Recognition

Management of the Bipolar Spectrum

Lifetime prevalence

ation 3.3 million in US

0.8% bipol 0.5% bipolar II

Equal distribution

- Onset
  - First impairment (age 15-19)
  - First treatment (age 20-24)
  - First hospitalization (age 25)
- Recurrence Average 2.7-9 years
- Rate of Suicide without treatment
  - 25% attempt
  - 15% commit

Bipolar Disorder
Underdiagnosed

>50% untreated for >5 years after onset of first symptoms

- 36% untreated for >10 years after onset of first symptoms
- 73% initially diagnosed with another psychiatric disorder
- 8 years (average) elapsed before bipolar disorder diagnosed

Bipolar Disorder
Morbidity

Recurrent illness in 80-90% of patients

- Functional recovery often lags behind symptomatic recovery
- Recurrent episodes may cause progressive deterioration in function between episodes
- Number of episodes may affect subsequent treatment response and prognosis

Impact of Untreated Bipolar Disorder

An average woman with onset of illness at age 25 will experience:

- Untreated
  - 9 year reduction in life expectancy
  - 14-year reduction in productivity
- Treated
  - Recapture 6.5 years in life expectancy
  - Recapture 10 years in productivity

Bipolar Disorder Mortality

Attempt Suicide at least 25%

- Suicide 1-15%

Suicide among mixed patients: 50%

Depressive and Manic Syndromes

Manic

- Elated, irritable

– Thinking

- Racing, over inclusive

– Physical

- Energy, reduces need for sleep

– Behavior

- Disinhibition, impulsivity

Depressive and Manic Syndromes

Depressive

- Sad, dysphoric

Thinking

- Reduced cognitive effort

– Physical

- Fatigue, somatic

– Behavior

- Inhibited goal directed behavior

DSM-IV Criteria for Mania

- Elevated, expansive or irritable mood

  3 or 4 0f the following:

  Inflated self-esteem or grandiosity

  Flight of ideas, racing thought

  – Decreased need for sleep
  – More talkative, pressured speech
  – Distractibility or agitation
  – Hyperactivity or agitation
  – Excessive involvement in pleasurable activity with high potential for painful consequences

DSM-IV: Major Depressive Episode

- Present nearly every day for a 2-week period
  - 1 0r 2 of the following:
    - Depressed mood (in children and adolescents, irritable mood can be present)
    - Marked diminished interest or pleasure in most activities (anhedonia)

DSM-IV: Major Depressive Episode (Cont.)

And four or more of following:

Significant decrease or increase in appetite or

Insomnia or hypersomnia

Psychomotor agitation or retardation

- Fatigue or loss of energy
- Feeling of worthlessness or excessive or inappropriate guilt
- Diminished ability to think, concentrate or make decision
- Recurrent thoughts of death, suicide ideation, specific suicide plan or suicide attempt.

Bipolar VS. Unipolar Depression

Bipolar episodes are associated with:

- Early age of onset
- Shorter duration
- Higher frequency
  - Anergia
  - Hypersonmia
  - Hyperphagia

Mixed states

Symptoms of mania and depression occur every day for at least 1 week to a degree that meets the criteria (except for the duration) of a major episodes of each (DSM-

Mood: usually depressed

- Activity: usually increased
- Thinking: characteristic of depression or mania or both

Rapid Cycling

4 or more distinct mood episodes within a 12-month period

- Up to 20% of all bipolar patients – more common in bipolar II

Risk factors includes:

- Length of illness
- Female
- Antidepressant use
- Thyroid disease (overt or subclinical)
- Older age

Other symptoms associated with Mania

Poor insight

- Suicide ideation

Psychotic symptoms (delusion, hallucinations, disorganized thinking)

- Memory impairment
- Increase libido, hypersexual behavior
- Interpersonal hostility

Prevalence of Psychosis in Bipolar Disorder

- 58% of patients have at least 1 psychotic symptom

  90% of the patients have at least 1 psychotic symptom by self-report

Mixed States

40% of manic episodes have prominent depressive fe

Varying type

- Clinical features
  - Mania at least as severe as nondepressive
  - Prominent anxiety, overarousal, panic
  - Suicide risk
  - Substance abuse, other complications

Diagnostic Criteria

- Manic (bipolar I) or hypomanic (bipolar II) syndrome
  - Abnormal affect
  - Associated behavior and symptoms
  - – Severe impairment/hospitalization(mania) or lack of impairment (hypomanic)
  - – Duration: 7 days (manic) or 4 days (hypomanic)
  - – Not caused by something else

Rapid Cycling

> 4 episodes over a 12-month period

- Sporadic, can happen anytime in course
  - Can be first episode
  - Outcome poor at 2 years, but not at 5 years
- Reduced lithium response by 2/3
- More common in women, bipolar II
- ? Role of antidepressants, thyroid

Genetics

Runs in familie

About 20% of 1 -degree relatives have major affective disorder

Risk is 25% for 1 parent, 75% for 2

– 85% concordance for monozygotic twins, about 15% dizygotic

– Specific genetic markers have been elusive

Course of Illness

Onset in adolescent/early adulthood

- Early onset: stronger family history

Almost always recurrent

- Early episodes are commonly associated with stressors; later episodes less so
- Frequency may increase, at least in a subset of patients

Onset: Early Manifestation

Episodes are expressed differently in children compared to adults

Early dysthymia, substance abuse, oppositional/conduct disorder, ADHD, anxiety

- Family history positive: likely bipolar
- Family history negative: ?

Episodes of Bipolar Disorder

- First mania in adolescence
  - More likely to be psychotic episode
  - More likely to have mood-incongruent feature
  - Likely to already have comorbidity
- Depression: can be subsyndromal
- Childhood: “affective storms”
- For diagnosis: family, social history

Bipolar Disorder Substance Abuse

Increased substance abuse in bipolar disorder: 60

Those with

- Increased family history of bipolar disorder
- Earlier onset and more frequent episodes of bipolar disorder
- More mixed states

Establishing Treatment Plan

- Evaluation
  - History from all sources
  - Interview pace and duration appropriate f patient
  - – Maintain boundaries
  - – Assure safety
- Setting of treatment: note trajectory of illness, lack of behavioral control

Pharmacologic Strategy

- Resolve symptoms as quickly and safel as possible
- Mood stabilizer choice based on response predictors and onset of response
- Adjunctive treatment based on symptoms and previous response

Mania: Treatments

- Lithium
- Anticonvulsants
  - Depakote
  - Tegretol
  - Lamictal
  - Neurontin
- Antipsychotics

Lithium

Advantages

- Proven; robust for classic, uncomplicated mania without previous episodes
- Useful second treatment otherwise

Disadvantages

- Not rapid, narrow therapeutic index, response drops off rapidly if “nonclassical” presentation, problem in pregnancy, side effects

Lithium: Side effects

GI upset

- T

Weight gain

Nephrogenic diabetes insipidus

- Reversible hypothyroidism
- Kidney failure

Valproate

Advantages

Proven; broad effective range including man patient with rapid cycling or mood instability, can treat quickly by loading with 20mg/kg/day, usually well-tolerated

- Disadvantages
  - Use in pregnancy,side effects, not always effective

Valproate: Side effects

- GI upset
- T
- Hair loss
- Weight gain
- Sedation
- Hepatotoxicity
- pancreatitis

Tegretol

Hepatic microsomal oxidation, induces metabolism of many psychotropic drugs, oral contraceptives and other medicine

- Side effects
  - Leucopenia, ataxia, diplopia

Neuroleptics in Mania

Use is nearly universal in mania, especially hospitalizes patients

60-70% of patients in 2 studies were still on neuroleptics after 6 months, regardless of clinical status

Long-Term effects of Conventional Antipsychotics

Can emerge during treatment or upon withdrawal of treatment

- Dystonia
- Parkinsonism
- Tardive dyskinesia
- All have been reported as more common in bipolar disorder than in schizophrenia

Risperidone

Advantages

Controlled studies suggesting effectiveness in mania; may be especially useful in psychotic bipolar episo r depressive features

- Disadvantages
  - Increase agitation, weight gain, EPS

Zyprexa

- Advantages
  - Controlled studies suggesting effectiveness in mania
- Disadvantages
  - Sedation
  - Weight gain

Management of Common Side Effects

Weight gain: proactive diet/exercise program

Hair loss: zinc, selenium supplement

Tremor: beta-blockers

- GI upset: food; antacids, H2 blockers

Lithium Discontinuation

Discontinuation in stable patients

"stable" patient relapsed

<14 day taper: accelerated relapse

Slower taper: delayed relapse

- HMO study
  - Most lithium treatment sporadic
  - Discontinue lithium: more ER, hospitalization

Conclusions

Bipolar disorders is a life-long illness whose presentation changes over the life span

- Many useful treatments are available
- Star with the most established treatments. Move systematically towards more speculative as necessary
- Treatment is a collaborative venture

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